U.S. Fish & Wildlife Service

*Threatened and Endangered Species*

# Spectacled Eider

## *(Somateria fischeri)*

Laura Whitehouse / USFWS

Ted Swem / USFWS

*Spectacled eiders are named for the bold black-rimmed eye patch on each side of the male's variegated green head. In females, a buff eye ring is set within a mottled brown head. This large sea duck is found only in the northern latitudes of Alaska and Siberia.*

Spectacled eiders are large sea ducks, 20-22 inches long. In the winter and spring, adult males are in breeding plumage with a black chest, white back, and pale green head with a long sloping forehead and white spectacle-like patches around the eyes. During the late summer and fall, males are entirely mottled brown. Females and juveniles are mottled brown year-round with pale brown eye patches.

### Status

Between the 1970's and the 1990's, the breeding population of spectacled eiders on the Yukon-Kuskokwim (Y-K) Delta declined by over 96%. The causes of this steep decline remain unknown, but its magnitude prompted the U.S. Fish and Wildlife Service (Service) to list the species as threatened under the Endangered Species Act in 1993. In addition to protection they receive under the ESA, any take of this species is prohibited under the Migratory Bird Treaty Act.

### Range and Population Size

Today, three primary nesting areas remain: the central coast of the Y-K Delta, the arctic coastal plain of Alaska, and the arctic coastal plain of Russia. Their fall and winter distribution was unknown until satellite telemetry led to the discovery of spectacled eiders' molting and wintering grounds at sea in 1995.

Important late summer and fall molting areas have been identified in eastern Norton Sound and Ledyard Bay in Alaska, and in Mechigmenskiy Bay and an area offshore between the Kolyma and Indigirka River Deltas in Russia. Wintering flocks of spectacled eiders have been observed in openings in sea ice in the Bering Sea between St. Lawrence and St. Matthew islands.

As recently as the 1960s, about 50,000 pairs of spectacled eiders nested on the Y-K Delta in western Alaska. But by 1992, only about 2,000 nesting pairs remained and only an average of about 5,000-6,000 nest on the Y-K Delta today. Scientists don't know if populations declined in northern Alaska, where an average of approximately 5,000-6,000 nest, or in Arctic Russia. Winter surveys in the Bering Sea, which include nonbreeding birds, indicate a minimum worldwide population of about 370,000 spectacled eiders.

### Habitat and Habits

Spectacled eiders are diving ducks that spend most of the year in marine waters, where they feed primarily on bottom-dwelling mollusks and crustaceans. In spring, breeding pairs move to nesting areas on wet coastal tundra and establish nests near shallow ponds or lakes.

During the spring season they feed by dabbling in ponds and wetlands, eating aquatic insects, crustaceans, and vegetation. Soon after eggs are laid, males leave the nesting grounds for offshore molting areas, usually by the end of June. Females whose nests fail leave the nesting area to molt at sea by mid-August. Breeding females and their young remain on the nesting grounds until early September. Molting flocks gather in relatively shallow coastal water usually 30-70 feet deep.

While moving between nesting and molting areas, spectacled eiders travel along the coast up to 31 miles offshore. During the winter months of October through March, they move far offshore to waters up to 213 feet deep, sometimes gathering in dense flocks in openings of nearly continuous sea ice.

David Ward / USGS

*Inset: During years of high fox predation, eider productivity is markedly lower. The Eider Recovery team recommends fox control during years when fox predation is predicted to be high. Above: male spectacled eider over water.* Bryce Lake / USFWS

**Understanding and Reducing Threats**
After listing spectacled eiders as threatened, the Service formed the Eider Recovery Team, which includes species and topic experts from universities, Federal, State and local governments, and the Alaska SeaLife Center, to help develop a recovery plan. When the plan was completed in 1996, the team tackled implementation.

Causes of the decline of spectacled eiders are not well understood. Shifts in the Bering Sea ecosystem, including weather patterns and complex changes in fish and invertebrate populations, may be affecting food availability and survival of spectacled eiders during the 8-10 month non-breeding season. On the breeding grounds and migration corridors, where threats are more feasibly addressed, lead poisoning, predation, and illegal harvest have been identified by the recovery team as constraints to recovery, so current research, education and management efforts focus on these topics through creative partnerships.

*Lead poisoning:* Studies in the mid-1990's on the Y-K Delta by U.S. Geological Survey biologists revealed that 35% of successful breeding females were exposed to lead from ingestion of spent lead shot in wetlands. Lead exposure reduced annual survival of females by about 34%. It may take more than 25 years for spent lead shot to settle to depths that are unavailable to eiders; until then, the threat persists. Service biologists are monitoring blood lead levels in spectacled eiders on the Arctic Coastal Plain to understand the magnitude of the threat there.

To address the lead contamination problem, the Alaska Board of Game prohibited the use of lead shot for upland game bird hunting on the North Slope and all small game hunting on the Y-K Delta (lead shot became illegal for waterfowl hunting in Alaska in the 1990s). The Service, in partnership with local governments and Alaska Department of Fish and Game, has implemented education programs to educate village stores about the benefits of non-toxic shot, and train local hunters how to shoot effectively with it.

*Predation:* Arctic foxes, ravens, and large gulls, the prime nest predators of spectacled eiders, may be increasing in areas where year-round food and shelter is provided by human activities. Through interagency consultation, the Service encourages Federal agencies that fund or authorize development projects in spectacled eider nesting habitat to require proper waste disposal methods to avoid attracting predators.

*Illegal Harvest:* Sport and subsistence hunting of spectacled eiders has been closed under the Migratory Bird Treaty Act since 1991; however, illegal harvest of hundreds of spectacled eiders likely occurs annually in Alaska. National Wildlife Refuges, other Service programs, and our partners on the Arctic Coastal Plain are using hunter education, law enforcement, and other outreach methods to reduce illegal harvest.

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